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Panel 3 - Computer Interface & Alarm Management

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Computer Interface & Alarm Management

- **Core Area 8 - SCADA Displays**
  - **Presents the Main Line System(s) Safety Critical Information Clearly to Operator**
    - Keep Miscellaneous Pump/Compressor Station Details Elsewhere
    - Maximize Use of Simple Color Graphics
    - Avoid Information Overload Phenomena
      - Presentation/Screen Overload?
      - Page or Multiscreen Spread
  - **Keep Primary Mainline Page Simple**
    - Even for Complex Systems
  - **Clearly Flag Abnormal Operation to Controller**

Computer Interface & Alarm Management

- ## **Core Area 9 - Alarm Management and Analysis**
  - **Alarm Tracking**
    - Number
    - Type
    - Priority Grouping (Color Flags)
    - Graphics Presentation
    - Don't "Lose" Critical Records
  - **Who Else is Reviewing Alarms Daily?**
    - Up the Management Chain
      - Beyond Control Center
      - Is There a System Exposure / Trend?

Computer Interface & Alarm Management

- ## <u>**Concluding General CRM Guidance**</u>
  - ### **CRM Regs Can Be Performance Based**
    - Address High Level Core Concepts
      - Don't Get Mired in Details or Volume
      - PHMSA Has Demonstrated In-House Technical Capability to Develop Such Regs on This Matter
    - Incorporating SCADA Hierarchy is Critical
    - Slow Down - Do This Right
      - Human Performance & Training Only Part of This Important Issue
    - Must Be Auditable and Enforceable
  - ### **Mandate Retention of Certain SCADA Records**
    - Types of Information
    - Retention Time of Computer Critical Records